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| APPLICATION NO.                                                                                                                                                           | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.             | CONFIRMATION NO.       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------------------|---------------------------------|------------------------|
| 10/578,631                                                                                                                                                                | 05/09/2006  | James Jago           | US030465US                      | 1444                   |
| 28159 7590 11/26/2008<br>PHILIPS MEDICAL SYSTEMS<br>PHILIPS INTELLECTUAL PROPERTY & STANDARDS<br>P.O. BOX 3003<br>22100 BOTHELL EVERETT HIGHWAY<br>BOTHELL, WA 98041-3003 |             |                      |                                 |                        |
|                                                                                                                                                                           |             |                      | EXAMINER<br>ROZANSKI, MICHAEL T |                        |
|                                                                                                                                                                           |             |                      | ART UNIT<br>3768                | PAPER NUMBER           |
|                                                                                                                                                                           |             |                      | MAIL DATE<br>11/26/2008         | DELIVERY MODE<br>PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/578,631

**Applicant(s)**

JAGO, JAMES

**Examiner**

MICHAEL ROZANSKI

**Art Unit**

3768

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 7 and 9-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7 and 9-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Objections***

Applicant is reminded that a complete listing of the claims must be present. Claims 1-6 were previously withdrawn as not elected in the restriction election, and are considered to be canceled. However, the claims must still be listed in the claim set, in similar fashion as canceled claim 8, in the claim set filed 4/28/08. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In regard to claim 11, it is unclear how the second operating parameter can be both different from the first operating parameter (i.e. the frame rate) and can be the frame rate. Applicant claims that the second operating parameter is the "number of transmissions..." or "the frame rate..." While the number of transmissions is a different parameter, the frame rate (in this alternative) would be the same as the first operating parameter.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 7, 9, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Haider et al (US 6,346,079).

Haider et al disclose a method and apparatus for adaptive frame rate adjustment as a function of target motion in an ultrasound imaging system. When target (i.e. tissue) motion is high (rapid target motion results from a moving transducer in a so-called search mode and/or from a stationary transducer with fast-moving tissue), high frame rate is more important and image quality (i.e. noise reduction) can be somewhat reduced. When target motion is low, image quality is more important (col 2, lines 30-45). The frame rate depends upon the number of transmit firings in an image frame. By reducing the number of firings, the frame rate is increased. Additionally, frame rate depends upon the degree of frame averaging, or image persistence. In Haider et al, the target motion is estimated, and this estimate is used to control the number of transmit firings per frame and/or the degree of frame averaging (col 2, line 46-col 3, line 3). Therefore, image frames are initially created using a particular frame rate and a particular degree of frame averaging. Then, the frames are analyzed in a frame-to-frame estimation of target motion. Based on this estimation, the frame rate is adjusted along with frame averaging. The ultrasound image is ultimately displayed (see figure 1).

Claims 11-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsushima (US 5,976,086).

Matsushima discloses a processor-based method and structure for temporal frame averaging responsive to tissue motion and practiced on current and prior frames using weighting equations including sum-differences of pixel values (col 9, lines 11-24; col 16, lines 40-67) and based upon movement with respect to a predetermined threshold (col 14, lines 29-62). The predetermined threshold is considered to be a minimum acceptable frame rate that is received from a user control. In the weighting average, a weighting factor can be lowered to a smaller value so that the influence of a previous frame is reduced and the influence of a new frame is increased (col 16, lines 40-46). In other words, if movement occurs or increases, the weighting factor can be lowered to reduce the influence of a previous frame in the weighting average.

### ***Response to Arguments***

Applicant's arguments with respect to claims 7 and 9-18 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL ROZANSKI whose telephone number is (571)272-1648. The examiner can normally be reached on Monday - Friday, 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Eric F Winakur/  
Primary Examiner, Art Unit 3768

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